

In the Claims

26. (Twice Amended) Memory circuitry comprising:

a semiconductor substrate;

a plurality of word lines received over the semiconductor substrate;

an insulative layer received over the word lines and the substrate, the insulative layer having at least one well formed therein, the well comprising a base received over the word lines, the well peripherally defining an outline of a memory array area, area peripheral to the well comprising memory peripheral circuitry area;

a plurality of memory cell storage capacitors received within the one well over the word lines, individual of the capacitors having a storage node electrode, one of the storage node electrodes being spaced laterally inward of the outline peripherally defined by the well; and

peripheral circuitry within the peripheral circuitry area operatively configured to write to and read from the memory array.

27. The memory circuitry of claim 26 wherein the base is substantially planar.

28. The memory circuitry of claim 26 wherein the word lines have insulative caps and the well base has a lowest portion which is received at least 2000 Angstroms above the caps.

29. The memory circuitry of claim 26 comprising buried digit lines, the well base having a lowest portion which is received at least 1000 Angstroms above outermost tops of the digit lines.

30. The memory circuitry of claim 26 comprising buried digit lines and wherein the base is substantially planar, and the well base being received at least 1000 Angstroms above outermost tops of the digit lines.

31. The memory circuitry of claim 26 wherein the insulative layer has a substantially planar outermost surface, and the capacitors have capacitor storage node electrodes having topmost surfaces received elevationally proximate the substantially planar outermost surface of the insulative layer.

32. The memory circuitry of claim 26 wherein the insulative layer is formed to have a substantially planar outermost surface, and the capacitors have capacitor storage node electrodes having topmost surfaces received elevationally above the substantially planar outermost surface of the insulative layer by less than 50 Angstroms.

33. (Twice Amended) Memory circuitry comprising:

a semiconductor substrate;

an insulative layer received over the substrate, the insulative layer having at least one well formed therein, the well peripherally defining an outline of a memory array area, area peripheral to the well comprising memory peripheral circuitry area, the well having a substantially planar base;

a plurality of memory cell storage capacitors received within the one well, the memory cell storage capacitors respectively comprising a storage node container which is received partially within the insulative layer through the well base, the respective storage node containers being spaced laterally inward of the outline peripherally defined by the well; and

peripheral circuitry within the peripheral circuitry area operatively configured to write to and read from the memory array.

34. The memory circuitry of claim 33 comprising word lines, wherein the word lines have insulative caps and the well base has a lowest portion which is received at least 2000 Angstroms above the caps.

35. The memory circuitry of claim 33 comprising buried digit lines, the well base having a lowest portion which is received at least 1000 Angstroms above outermost tops of the digit lines.

36. The memory circuitry of claim 33 wherein the insulative layer has a substantially planar outermost surface, and the capacitors have capacitor storage node electrodes having topmost surfaces received elevationally proximate the substantially planar outermost surface of the insulative layer.

37. The memory circuitry of claim 33 wherein the insulative layer is formed to have a substantially planar outermost surface, and the capacitors have capacitor storage node electrodes having topmost surfaces received elevationally above the substantially planar outermost surface of the insulative layer by less than 50 Angstroms.

48. The memory circuitry of claim 26 wherein the insulative layer comprises SiO_2 , and further comprising an Si_3N_4 comprising layer received on the well base.

49. The memory circuitry of claim 48 wherein the Si_3N_4 comprising layer has a thickness of from about 40 Angstroms to about 125 Angstroms.

50. The memory circuitry of claim 48 wherein the Si_3N_4 comprising layer has a thickness of from about 50 Angstroms to about 70 Angstroms.

51. The memory circuitry of claim 33 wherein the insulative layer comprises SiO_2 , and further comprising an Si_3N_4 comprising layer received on the well base.

52. The memory circuitry of claim 51 wherein the Si_3N_4 comprising layer has a thickness of from about 40 Angstroms to about 125 Angstroms.

53. The memory circuitry of claim 51 wherein the Si_3N_4 comprising layer has a thickness of from about 50 Angstroms to about 70 Angstroms.